

Abstract

A plasma processing apparatus includes a processing vessel in which a plasma of a CF based gas therein is excited to perform microprocessing on a surface of an object to be processed; and in-chamber components disposed inside the processing vessel, wherein at least one of surfaces of the processing vessel's inner wall and the in-chamber components is coated with an Y_2O_3 sprayed coating over a predetermined area and an accumulation of CF based polymer deposits on the surfaces of the inner wall and the in-chamber components is prevented by a reaction between the Y_2O_3 sprayed coating and the CF based polymer deposits.